(51) International Patent Classification⁷:	H04L	(74) **Agent:** HOLM, Chris, L.; Milbank Tweed Hadley & Mc-Cloy LLP, 1 Chase Manhattan Plaza, New York, NY 10005 (US).

(51) **International Patent Classification⁷:** H04L

(21) **International Application Number:** PCT/US01/51322

(22) **International Filing Date:**
13 November 2001 (13.11.2001)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
60/248,133   13 November 2000 (13.11.2000)   US
Not furnished   13 November 2001 (13.11.2001)   US

(71) **Applicant:** MORGAN GUARANTY TRUST COMPANY OF NEW YORK [US/US]; 60 Wall Street, New York, NY 10005 (US).

(72) **Inventors:** BLAUVELT, Josehph, P.; 184 Nutley Avenue, Nutley, NJ 07110 (US). CURIALLE, Frank, J.; 19 Alpaugh Drive, Asbury, NJ 08802 (US).

(74) **Agent:** HOLM, Chris, L.; Milbank Tweed Hadley & McCloy LLP, 1 Chase Manhattan Plaza, New York, NY 10005 (US).

(81) **Designated States** *(national)*: AU, CA, CN, JP, KR, MX.

(84) **Designated States** *(regional)*: European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 02/47314 A2

(54) **Title:** METHOD AND SYSTEM FOR MATCHING SHORT TRADING POSITIONS WITH LONG TRADING POSITIONS

(57) **Abstract:** A system and method for automatically matching short and long positions of participants and automatically generating repurchase agreements ("repo") and reverse repurchase agreements ("reverse repo"). The system and method provide trading anonymity and various filtering options for the members.

METHOD AND SYSTEM FOR MATCHING SHORT TRADING POSITIONS
WITH LONG TRADING POSITIONS

This application claims priority to U.S. Provisional Patent application serial
number 60/248,133, which was filed November 13, 2000, entitled Method And

5   System For Providing An Efficient, Cost Efficient, Cost Effective Centralized
Mechanism By Which A Dealer Looking To Cover Short Positions Will Find A
Favorable Rate, and U.S. Patent application serial number TBA, which was filed
November 13, 2001, entitled Method And System For Matching Short Trading
Positions With Long Trading Positions, the disclosures of which are incorporated

10   herein by reference.

Background Of The Invention

Presently, a securities dealer seeking to cover short positions will individually
contact other clients, dealers, brokers or securities lenders to do so. This process is
generally time consuming, costly and at times inefficient. Furthermore, unless the

15   dealer seeking to cover short positions contacts each and every broker, dealer or
securities lender, there is no way to ensure that the dealer will find the security they
need to cover a short position.

What is desired, therefore, is a method and system that will provide an
efficient, cost effective centralized mechanism by which a dealer seeking to cover

20   short positions will find available long positions at a favorable rate. These and other
advantages are achieved by the invention described herein below.

Summary of the Invention

In one embodiment, the invention provides a method and system for
automatically identifying a counter party position that has a short or long position.

25   The method comprises receiving at a first terminal at least two short positions. Also,
receiving at the first terminal at least two long positions. Also, identifying at the first
terminal a selected short position from the at least two short positions and a selected
long position from the at least two long positions, the selected short position and the
selected long position identified by parameters associated with the positions. Also,

30   providing sufficient information from the first terminal to a second terminal and to a

third terminal to allow a transaction between the selected short position and the selected long position.

Description of the Drawings

The foregoing features and other aspects of the invention are explained in the

5   following description taken in conjunction with the accompanying figures wherein:

FIG. 1 illustrates an embodiment of a system that may be used with the .invention;

FIG. 2 illustrates an embodiment of steps in a method of the invention; and

FIG. 3 illustrates an embodiment of a system and method according to one

10   embodiment of the invention.

It is understood that the figures are not limiting and are for illustration purposes only.

Detailed Description

The various embodiments of the invention described below may be practiced

15   by a small group of members, such as members of a group or consortium. The embodiments may also be practiced more generally by investors individually or through their broker, dealer, agents, in conjunction with a smaller member group.

To better understand the various embodiments of the invention, it is helpful to generally understand short and long positions within the context of securities and

20   securities trading. A short position generally means that an investor has sold more of a particular asset or security than they own. A long position generally means that an investor owns more of a particular asset or security than they have sold. The asset or security might be an equity security, such as a stock, or it might be a debt security, such as a bond. Conceptually with a short position, the investor will eventually have

25   to get the rest of the assets they sold, but don't currently own. Alternatively, if an investor has a long position in a particular asset or security, they may be willing to "lend" some of those securities to another investor who has a short position in the same security. Of course, lending generally implies some form of interest or compensation in return to the party owning the securities. In this way, the investor

30   with a long position has an opportunity to earn a profit in the form of interest from their long position, and the investor with a short position has an opportunity to pay a

2

known amount, in the form of interest, to reduce their borrowing costs by covering
their short position.

As part of the process of covering a short position with a long position, it is
common to use a repurchase agreement ("repo"). A repo is an agreement between
5   two parties whereby one party sells a security to the other at a specified price and
stated finance rate with a commitment to repurchase the security at a later date. The
finance rate may be fixed or variable. The duration of the trade may be for 1 day
(called an Overnight deal), or for a specified duration (called a term deal), or for an
indeterminate time, but usually less than 1 year (which is called an Open deal). In
10 essence, a repo is a secured loan. The party purchasing the security is making funds
available to the seller and holds the security as a form of collateral.

"Reverse repo" is a term used to describe the other side of a repo transaction.
The party selling and later repurchasing the security is said to perform a repo. The
other party -- one that purchases and later resells the security -- is said to perform a
15 reverse repo.

Referring to FIG. 1, an embodiment of a system 100 used in the invention
includes a number of computers or terminals 102, 103, 104, 105. Computers 102,
103, 104, 105 are interconnected to another computer 106 by a network 108.
Computers 102, 103, 104, 105, 106 include at least one processor 110, memory 112,
20 fixed and removable storage for data and/or code 114, 116, input/output devices 118
and network interface devices 120. Interconnection network 108 is the Internet, a
direct connection, wired, wireless, infrared or other type of secure or unsecure data
and information exchange.

For purposes of the description herein, the various embodiments of the method
25 and system of the present invention may be referred to as "Position Billboard".
Furthermore, to carry out the concepts of Position Billboard, there is described herein
a third party or an entity "NewCo" that participates in or expedites various aspects of
Position Billboard.

Generally in one embodiment, the invention is a securities short covering
30 facility that allows members to cover their short positions at more attractive financing
rates than current industry alternatives. In this embodiment, the invention

3

systematically obtains long and short position information from each participant or member, processes the information in accordance with any system or member-controlled parameters, matches the short positions of participants with the long positions of other participants, and feeds the resultant activity back to each participant

5   in the form of system-generated finance trades. NewCo acts as a third party agent, thus allowing the invention to provide anonymity among its participants.

The various embodiments of the invention provide a number of benefits. Some of those benefits are: reduced borrowing costs to participants through reduced fees; reduced margin requirements, thereby saving working capital for the borrower;

10   attracting collateral by enabling participants to further reduce their borrow costs and/or earn incremental revenue for their non-tight lending; and creating balance sheet netting opportunities by booking both trades as Repos / Reverse Repos with a counter party, such as Government Securities Clearing Corporation ("GSCC").

GSCC is an industry service organization that serves to ensure orderly

15   settlement in the government securities market. It should be understood that while the present description of the invention refers to GSCC and the United States securities market, this invention can be implemented for foreign securities markets as well that employ similar netting and counterparty risk criteria.

Other benefits of the embodiments of the invention are: increased liquidity in

20   the lending market by having more collateral available for lending; maintaining the anonymity of participants by providing a third party agent; and creating sales force efficiencies enabling the sales force to focus on revenue generating opportunities.

As described above, an objective of some embodiments of the invention is to provide the NewCo members with a centralized mechanism to pool their long

25   inventory for the purpose of covering short positions and generating the appropriate finance transactions to support those coverings. Finance trades generated by the various matching processes of the invention are done on an overnight basis at an agreed upon overnight financing rate.

In this manner, the various embodiments of the invention provide members

30   with an efficient and less expensive "market" for short term financing. Without the invention, the majority of this activity is executed through inter-dealer brokers,

4

dealer-to-dealer, and securities lenders. With the invention, participants and members of the NewCo entity save fees paid and margin costs on these transactions.

In order to maintain trading anonymity and facilitate settlement of on-side finance transactions, members of NewCo generally agree that the counterparty to their

5   on-side transactions will be NewCo as agent. Members of NewCo also generally agree to partake in settlements through an Omnibus clearance account under the name of NewCo. This helps to assure that the members' and participants' long and short positions, hence their trading strategies, are kept anonymous throughout the settlement cycle. As in the securities lending market, members do have the right to

10   inquire about the identity of the member on the other side of their trades.

NewCo members also have the ability to establish certain "filters" which have the effect of excluding some long or short positions. These filters can be by notional size (high, low or a range), security identifier (such as CUSIP number), security type, maturity range and other parameters, which are apparent to one of ordinary skill in the

15   art. "CUSIP" stands for Committee on Uniform Securities Identification Procedures, and this committee supplies a unique nine-character identification, called the CUSIP number, for each security approved for trading in the U.S., to facilitate clearing and settlement. The filters can also be modified intra-day and any subsequent position refreshes would be applied to the revised filters. In one embodiment of the invention,

20   the maintenance of filtering parameters is the responsibility of each member, thus insuring that only desired positions are downloaded.

Once the filters have been established, each member downloads their long and short positions, as well as their term repo and reverse repo transactions. Based upon members' parameters and agreed upon processing rules, the invention first attempts to

25   cover a participant or member's short positions by substituting collateral that is out on term and open repo (with other members). NewCo keeps track of original start of day positions it has received from its members, as well as positions that result from the substitution transactions.

After all substitutions have occurred, the process matches the remaining short

30   positions with the long positions of other members and generates the appropriate repo/reverse transactions. An overnight repo transaction is generated for the member

with the long position, and an overnight reverse repo is generated for the member

with the short position, each with the agreed upon overnight interest rate. In the event

the total long position is greater than the total short position for a given CUSIP

number, the lending occurs on a pro-rata basis. Similarly, when the total short

5   position is greater than the total long position for a given CUSIP number, the

borrowing occurs on a pro-rata basis.

Both the substitution and borrow/loan trades feed to the respective member's

proprietary systems for position updating and settlement processing. The counterpart

to each trade is the NewCo entity, and each member delivers/receives securities

10   to/from a NewCo Omnibus account. NewCo keeps track of original start of day

positions it has received from its members, as well as positions that result from short

covering transactions.

Members have on-line inquiry capability to view only their own filters,

restrictions, substitutions, downloaded start of day positions, positions excluded from

15   the start of day download, executed trades and current positions. This information is

also available in electronic form to facilitate reconcilliations. Members are not able to

see the data of other participants.

In one embodiment, the matching process runs once per day. In other

embodiments, more than one batch per day is run. The invention also obtains vendor

20   prices, which are used for calculating the market value on (substitution and)

borrow/loan transactions.

Referring to FIG. 2, one embodiment of the invention process flow begins at

steps 202, 204, where members or participants at terminals 2 and 3 (represented in

FIG. 1 by computers 102, 103, 104, 105) identify their long and short positions. As

25   described above, in one embodiment, this occurs on a daily basis. In other

embodiments, this occurs at intervals during the trading day.

At steps 206, 208, the members or participants each send the short and long

positions that they identified to terminal 3 (represented in FIG. 1 by computer 106).

At steps 210, 212, terminal 3 receives the short and long positions from

30   terminals 1 and 2. The respective positions are handled by terminal 3 in a manner

6

such that they can be individually tracked or traced to the sending participant or member.

At steps 214, 216, terminal 3 filters the positions. This filtering is described generally above, and is according to the parameters that are established by the

5 submitting member or participant. For example, one participant may require that their positions for a particular security be matched only with certain other participants. Or, they may require that the matching be according to certain allocation percentages. Or they may require that some percentage of their position not be matched.

At step 218, after the positions have been filtered, terminal 3 matches short

10 positions with long positions. This matching occurs on a CUSIP basis until all positions that can be matched have been matched.

At step 220, terminal 3 considers any filters that have been established and allocates the long positions for each CUSIP to the short positions for that CUSIP. As discussed above, if there are more long positions than short positions, the lending is

15 on a pro-rata basis. Alternatively, if there are more short positions than long positions, the borrowing is on a pro-rata basis.

Once the long and short positions have been matched and any allocation completed, then at steps 222, 224, terminal 3 creates the appropriate finance trades and informs terminals 1 and 2 of the trades.

20 Finally, at steps 226, 228, terminals 2 and 3 receive the position match information.

As illustrated in FIG. 2, filtering is performed by terminal 1. However, it is possible that terminals 2 and 3 perform some or all of the filtering before the positions are sent to terminal 1.

25 As illustrated in FIG. 3, the various elements of system 100 of the invention generally use an open-ended architecture to facilitate and expedite the exchange of information with its clients. Features provided include standardized message formats, instantaneous restart and recovery, real-time connectivity to clients and a global web-oriented network. In one embodiment, the invention operates within pre-scheduled

30 processing cycles but is designed for real-time execution.

Anonymity among its clients is also a feature of some embodiments of the invention. Each member can view only their data and cannot gain access to other clients' data. Client access is achieved through rigorous sign-on security features such as encrypted sign-on IDs and passwords. Once a client successfully gains access

5   to its own domain, the available functions are based upon the authorization level. Various authorization levels within client firms are established.

Although illustrative embodiments have been described herein in detail, it should be noted and will be appreciated by those skilled in the art that numerous variations may be made within the scope of this invention without departing from the

10   principle of this invention and without sacrificing its chief advantages.

Unless otherwise specifically stated, the terms and expressions have been used herein as terms of description and not terms of limitation. There is no intention to use the terms or expressions to exclude any equivalents of features shown and described or portions thereof and this invention should be defined in accordance with the claims

15   that follow.

We claim:

1.   A method for automatically identifying a counter party position for a short or long position, the method comprising:

receiving at a first terminal at least two short positions;

5   receiving at the first terminal at least two long positions;

identifying at the first terminal a selected short position from the at least two short positions and a selected long position from the at least two long positions, the selected short position and the selected long position identified by parameters associated with the positions; and

10   providing sufficient information from the first terminal to a second terminal and to a third terminal to allow a transaction between the selected short position and the selected long position.

2.   A method according to claim 1, further comprising filtering the at least two short positions or the at least two long positions according to filter parameters.

15   3.   A method according to claim 2, wherein the filter parameter is a percentage.

4.   A method according to claim 2, wherein the filter parameter is a member identity.

5.   A method according to claim 2, wherein the filter parameter is a limit
20   on the number of counter parties.

6.   A method according to claim 1, wherein identifying includes matching CUSIP information associated with the at least two short positions and CUSIP information associated with the at least two long positions.

7.   A method according to claim 1, wherein the at least two short positions
25   include short positions in different securities.

8.   Computer executable software code transmitted as an information signal, the code for automatically identifying a counter party position for a short or long position, the code comprising:

code to receive at a first terminal at least two short positions;

code to receive at the first terminal at least two long positions;

code to identify at the first terminal a selected short position from the at least two short positions and a selected long position from the at least two long positions, the selected short position and the selected long position identified by parameters

5   associated with the positions; and

code to provide sufficient information from the first terminal to a second terminal and a third terminal to allow a transaction between the selected short position and the selected long position.

9.   A computer-readable medium having computer executable software

10   code stored thereon, the code for automatically identifying a counter party position for a short or long position, the code comprising:

code to receive at a first terminal at least two short positions;

code to receive at the first terminal at least two long positions;

code to identify at the first terminal a selected short position from the at least

15   two short positions and a selected long position from the at least two long positions, the selected short position and the selected long position identified by parameters associated with the positions; and

code to provide sufficient information from the first terminal to a second terminal and a third terminal to allow a transaction between the selected short position

20   and the selected long position.

10.   A programmed computer for automatically identifying a counter party position for a short or long position, comprising:

a memory having at least one region for storing computer executable program code, and

25   a processor for executing the program code stored in the memory, wherein the program code comprises:

code to receive at a first terminal at least two short positions;

code to receive at the first terminal at least two long positions;

code to identify at the first terminal a selected short position from the at least

30   two short positions and a selected long position from the at least two long positions,

10

the selected short position and the selected long position identified by parameters associated with the positions; and

　　　code to provide sufficient information from the first terminal to a second terminal and a third terminal to allow a transaction between the selected short position
5　　and the selected long position.

　　　11.　　A method for automatically identifying a counter party position for a short or long position, the method comprising:

　　　receiving at a first terminal at least two short positions for securities identified by CUSIP;

10　　receiving at the first terminal at least two long positions for securities identified by CUSIP;

　　　filtering the at least two short positions or the at least two long positions according to filter parameters;

　　　identifying at the first terminal a selected short position from the at least two
15　　short positions and a selected long position from the at least two long positions, the selected short position and the selected long position identified by comparing and matching the CUSIP of the respective selected short and long positions; and

　　　providing sufficient information from the first terminal to a second terminal and to a third terminal to allow a transaction between the selected short position and
20　　the selected long position.

　　　12.　　A method for automatically identifying a counter party position for a short or long position, the method comprising:

　　　identifying at least two short positions;

　　　sending information on the at least two short positions to a first terminal; and
25　　receiving sufficient information from the first terminal to allow a transaction between a selected short position and a selected long position, the selected short position one of the at least two short positions, wherein the selected short position is identified from the at least two short positions and the selected long position is identified from at least two long positions by parameters associated with the positions,
30　　and information on the at least two long positions is sent to the first terminal.

11

13.   A method for automatically identifying a counter party position for a

short or long position, the method comprising:

identifying at least two long positions;

sending information on the at least two long positions to a first terminal; and

5   receiving sufficient information from the first terminal to allow a transaction

between a selected long position and a selected short position, the selected long

position one of the at least two long positions, wherein the selected long position is

identified from the at least two long positions and the selected short position is

identified from at least two short positions by parameters associated with the

10   positions, and information on the at least two short positions is sent to the first

terminal.